

Claims:

1. (Original) A lithographic process for fabricating an article comprising:

- introducing an image of a pattern into a layer of energy sensitive material formed over a substrate;
- developing the image to form the first pattern having features of a first size in the energy sensitive material;
- reducing the size of at least a portion of the developed features having the first size by exposing the features having the first size to a liquid isotropic etchant to form features having a second size; and
- transferring the pattern with the features having a second size into the underlying substrate.

2. (Currently Amended) The process of claim 1 wherein the image is introduced into the energy sensitive resist material by directing radiation onto a lithographic pattern mask thereby projecting an image of the mask pattern into the energy sensitive resist material.

3. (Currently Amended) The process of claim 1 wherein the image is introduced into the energy sensitive resist material by directly writing the pattern using a beam of radiation.

4. (Original) The process of claim 1 wherein the energy sensitive material is formed on an anti-reflection coating layer formed over a substrate.

5. (Original) The process of claim 4 wherein the anti-reflection coating is an inorganic anti-reflection coating.

6. (Original) The process of claim 5 wherein the anti-reflection coating is an inorganic dielectric material comprising silicon, oxygen and nitrogen.

7. (Original) The process of claim 5 wherein the anti-reflection coating is formed over the substrate by chemical vapor deposition.

8. (Currently Amended) The process of claim 1 wherein the layer of energy sensitive resist material is formed on a layer of polycrystalline silicon formed over the substrate.

9. (Original) The process of claim 2 wherein the wavelength of the radiation directed onto the mask is selected from x-ray radiation, extreme ultraviolet radiation, 157 nm radiation, 193 nm radiation, deep ultraviolet radiation, I-line radiation and particle beam radiation.

10. (Original) The process of claim 9 wherein the particle beam radiation is selected from the group consisting of ion beam radiation and electron beam radiation.

11. (Original) The process of claim 1 wherein the article is a semiconductor device.

12. (Original) The process of claim 1 wherein the article is an optical device.

13. (Original) The process of claim 1 wherein the article is a lithographic mask.

14. (Original) The process of claim 1 wherein the substrate is a semiconductor substrate on which is formed a layer of oxidized silicon.

15. (Currently Amended) The process of claim 1 wherein the energy sensitive resist material is a positive energy sensitive resist material.

16. (Original) The process of claim 1 further comprising baking the developed pattern before the reducing step

17. (Original) The process of claim 16 wherein the developed pattern is baked at a temperature that is below the glass transition temperature of the energy sensitive material.

18. (Original) The process of claim 5 wherein the anti-reflection coating is a hardmask coating.

19. (Original) The process of claim 1 wherein the energy sensitive material is formed on a hard mask coating formed over a substrate.